



SEP 29 2003

## TRANSMITTAL OF APPEAL BRIEF (Large Entity)

Docket No.  
ITL.0341USAFS  
HJ

Re Application Of: Christopher H. Genly

Serial No.	Filing Date	Examiner	Group Art Unit
09/494,714	January 31, 2000	Angela A. Armstrong	2654

Invention: PROVIDING PROGRAMMING INFORMATION IN RESPONSE TO SPOKEN REQUESTS

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Dated:

9/26/03

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Christopher H. Genly § Art Unit: 2654  
Serial No.: 09/494,714 §  
Filed: January 31, 2000 § Examiner: Angela A. Armstrong  
Title: PROVIDING PROGRAMMING §  
INFORMATION IN RESPONSE TO § Docket No.: ITL.0341US  
SPOKEN REQUESTS § (P8391)

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**APPEAL BRIEF**

Sir:

Applicant respectfully appeals from the final rejection mailed June 17, 2003.

**I. REAL PARTY IN INTEREST**

The real party in interest is the assignee Intel Corporation.

**II. RELATED APPEALS AND INTERFERENCES**

None.

**III. STATUS OF THE CLAIMS**

Claims 1, 4-14, 17-23, and 26-30 were rejected. The rejection of claim 11 is appealed.

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Lynda K. Self

#### **IV. STATUS OF AMENDMENTS**

The amendments in the Reply to Final Rejection were not entered.

#### **V. SUMMARY OF THE INVENTION**

An electronic programming guide may respond to conversational speech, with spoken or visual responses, including graphical user interfaces, in accordance with one embodiment of the present invention. See specification at page 3, line 10 through page 3, line 12.

In any case, the system uses a voice user interface (VUI) which interfaces between the spoken request for information from the user and the system. The voice user interface and a graphical user interface advantageously communicate with one another so that each knows any inputs that the other has received. That is, if information is received from the graphical user interface to provide focus to a particular topic, such as a television program, this information may be provided to the voice user interface to synchronize with the graphical user interface. This may improve the ability of the voice user interface to respond to requests for information since the system then is fully cognizant of the context in which the user is speaking. See specification at page 4, line 14 through page 4, line 23.

Referring to Figure 1, the system software may include an application 16 that may be an electronic programming guide application in one embodiment of the present invention. In the illustrated embodiment, the application 16 includes a voice user interface 12 and a graphical user interface 14. The application 16 may also include a database 18 which provides information such as the times, programs, genre, and subject matter of various programs stored in the database 18. The database 18 may receive inquiries from the voice user interface 12 and the graphical

user interface 14. The graphical and voice user interfaces may be synchronized by synchronization events.

The voice user interface 12 may also include a speech synthesizer 20, a speech recognizer 21 and a natural language understanding (NLU) unit 10. In other embodiments of the present invention, output responses from the system may be provided on a display as text from a synthesizer other than as voice output responses. The voice user interface 12 may include a grammar 10a which may be utilized by the recognizer 21. See specification at page 5, line 20 through page 6, line 9.

One embodiment of a processor-based system for implementing the capabilities described herein, shown in Figure 9, may include a processor 120 that communicates across a host bus 122 to a bridge 124, an L2 cache 128 and system memory 126. The bridge 124 may communicate with a bus 130. The bus 130, in turn, may be coupled to a display controller 132 which drives a display 134 in one embodiment of the invention.

The display 134 may be a conventional television. In such case, the hardware system shown in Figure 9 may be implemented as a set-top box 194 as shown in Figure 9A. The set-top box 194 sits on and controls a conventional television display 134.

A microphone input 136 may lead to the audio codec (AC'97) 136a where it may be digitized and sent to memory through an audio accelerator 136b. Sound data generated by the processor 120 may be sent to the audio accelerator 136b and the AC'97 codec 136a and on to the speaker 138.

In some embodiments of the present invention, there may be a problem distinguishing user commands from the audio that is part of the television program. In accordance with another embodiment of the present invention, a differential amplifier 136c differences the audio output

from the television signal and the input received at the microphone 136. This reduces the feedback which may occur when audio from the television is received by the microphone 136 together with user spoken commands.

In some embodiments of the present invention, a microphone 136 may be provided in a remote control unit 202 which is used to operate the system 192, as shown in Figure 9A. For example, the microphone inputs may be transmitted through a wireless interface 206 to the processor-based system 192 and its wireless interface 196 in one embodiment of the present invention. Alternatively, the remote control unit 202 may interface with the television receiver 134 through its wireless interface 198. See specification at page 21, line 3 through page 22, line 14. See specification at page 21, line 13 through page 22, line 14.

## VI. ISSUES

### A. Is Claim 11 Obvious Over Schein, Tomitsuka, Mueller, and the Alleged Well Known Prior Art?

## VII. GROUPING OF THE CLAIMS

Only one claim is appealed.

## VIII. ARGUMENT

### A. Is Claim 11 Obvious Over Schein, Tomitsuka, Mueller, and the Alleged Well-Known Prior Art?

Claim 11 depends from claim 1. Claim 1 calls for a speech recognizer that recognizes spoken requests for television programming information. Claim 11 further calls for a processor coupled to a speaker and a microphone, the output from the speaker being subtracted from the

output of the microphone to reduce the interference between the audio portion of a television program and a spoken request.

In other words, the system facilitates speech recognition of commands for controlling television programming by canceling out the audio portion of the television program. Absent such cancellation, the audio portion of the program could cause interference with the spoken commands.

In the final rejection, the Examiner states that “Schein fails to explicitly teach a system including a processor coupled to a speaker and a microphone, the output of said speaker being subtracted from the output of said microphone to reduce interference.” However, the Examiner contended that this was well known.

When challenged to cite references in support thereof, the Examiner, in the Advisory Action, cited three references. Plainly, none of these references have anything whatsoever to do with the claimed invention. Not one of them has anything to do with canceling the audio portion of a television program to avoid interference with spoken commands. In fact, they have nothing to do with speech recognition whatsoever. In view of the admission that the cited references fail to teach the claimed invention, and the fact that the newly cited references similarly fail to suggest the alleged well known art, there is an admitted failure to make out a *prima facie* rejection.

Moreover, there is no effort to show any rationale to make some combination of the three references suggested as teaching what is well known in the art with any of the other three cited references. In particular, no effort is made to cite any rationale from within the references which would support their combination. The assertion to the contrary in the final rejection simply

amounts to the application of hindsight reasoning and is plainly improper under existing case law.

Therefore, the rejection should be reversed.

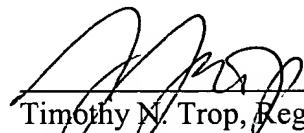
## IX. CONCLUSION

Applicant respectfully requests that each of the final rejections be reversed and that the claims subject to this Appeal be allowed to issue.

Respectfully submitted,

Date:

7/26/03

  
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## APPENDIX OF CLAIMS

1. A system comprising:
  - a speech recognizer that recognizes spoken requests for television programming information;
  - an output device that generates responses to spoken requests for television programming information;
  - a module coupled to said recognizer to implement conversational speech; and
  - a graphical user interface which provides information in a visual form about television programming and a voice user interface which responds to voice requests from the user, said graphical user interface and said voice user interface communicating such that the focus of one of said interfaces is communicated to the other.
4. The system of claim 1 including a memory that stores an indication when a attribute recognized by the speech recognizer is spoken by the speech synthesizer.
5. The system of claim 1 wherein said module produces a select variable and a where variable from a query received from a user.
6. The system of claim 1 wherein said module develops a meaning derived from said speech recognizer and historical information about previously recognized speech and uses the historical information to modify the meaning derived from said speech recognizer.
7. The system of claim 6 wherein said module determines whether a query includes both a first and a second type of variable and if so, does not use the historical information to alter the meaning derived from a the speech recognizer.
8. The system of claim 7 wherein said module determines whether only one of two variable types is contained in a spoken request and if so, merges a variable with historical information to derive a meaning from the request.

9. The system of claim 2 wherein said module parses and stores time attributes in a request.

10. The system of claim 9 wherein said module forms time attributes with time ranges.

11. The system of claim 1 further including a processor coupled to a speaker and microphone, the output from said speaker being subtracted from the output of said microphone to reduce interference between the audio portion of a television program and a spoken request.

12. The system of claim 1 including a television coupled to a set-top box and a remote control that controls said set-top box.

13. The system of claim 1 wherein said output device is a speech synthesizer that generates voice responses.

14. A method comprising:

recognizing spoken requests for television programming information;  
generating responses to spoken requests for television programming information;  
providing conversational speech recognition; and  
providing a graphical user interface which generates information in a visual form about television programming and a voice user interface which responds to voice requests from the user, and communicating the focus of one of said interfaces to the other of said interface.

17. The method of claim 14 including storing an indication when a generated response includes a recognized attribute from the spoken request.

18. The method of claim 14 including parsing a select variable and a where variable from a spoken request.

19. The method of claim 14 including storing meanings derived from current and historical requests and using the historical requests to supplement the meaning derived from said current requests.

20. The method of claim 14 including parsing and storing time attributes in a request.

21. The method of claim 14 further including subtracting a signal from a television from the input from the use to reduce interference between the audio portion of a television program and a spoken request.

22. The method of claim 14 wherein generating responses includes synthesizing spoken responses.

23. An article comprising a medium for storing instructions that cause a processor-based system to:

recognize spoken requests for television program information;  
generate responses to spoken requests for television programming information;  
provide conversational speech recognition; and  
provide a graphical user interface which generates information in a visual form about television programming and a voice user interface which responds to voice request from the user, and to indicate the focus of one of said interfaces to the other of said interfaces.

26. The article of claim 23 further storing instructions that, cause a processor-based system to store an indication when a generated response includes a recognized attribute from the spoken request.

27. The article of claim 23 further storing instructions that, if executed, enable a processor-based system to parse a SELECT variable and a WHERE variable from a spoken request.

28. The article of claim 23 further storing instructions that cause a processor-based system to store meanings derived from the current and historical request and use the historical request to supplement the meaning derived from said current request.

29. The article of claim 23 further storing instructions that cause a processor-based system to parse and store time attributes in a request.

30. The article of claim 23 further storing instructions that cause a processor-based system to generate responses to spoken requests by synthesizing spoken responses.